UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

DATE: DEC 16 2016

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Verso Corporation Wisconsin Rapids Mill, Wisconsin Rapids, Wisconsin

FROM: David Sutlin, Environmental Engineer
AECAB (MN/OH)

THRU: Brian Dickens, Section Chief
AECAB (MN/OH)

TO: File

BASIC INFORMATION

Facility Name: Verso Corporation Wisconsin Rapids Mill (The mill)

Facility Location: 600 4th Avenue North, Wisconsin Rapids, WI 54495

Date of Inspection: November 30, 2016

Lead Inspector: David Sutlin, Environmental Engineer

Other Attendees:

1. Cynthia Schafer, EPA, Environmental Engineer
2. Deanna Webster, Verso, EHS Manager
3. Rebecca Sommers, Verso, Environmental Manager
4. Susan Anderson, Verso, Environmental Technician
5. Brian Valenzuela Alcantar, Verso, Air Quality Engineer
6. Kelly Guay, Verso, Fiberline Business Unit Manager
7. Craig Helgeson, Verso, Mill Manager

Purpose of Inspection: CAA Inspection

Facility Type: Kraft Pulp Mill

Regulations Central to Inspection: BACT, 40 CFR Part 63, Subparts S and MM

Arrival Time: 8:40 AM
Departure Time: 3:15 PM

Inspection Type:
☒ Unannounced Inspection
☐ Announced Inspection

OPENING CONFERENCE

☒ Credentials Presented
☒ CBI warning to facility provided

The following information was obtained verbally from the attendees listed above unless otherwise noted.

Company Ownership: The mill was acquired by Verso Corporation in 2015. Prior to this acquisition, it was owned by NewPage Corporation. There are two independently controlled facilities on the premises. Specialty Minerals Inc. operates a facility that supplies precipitated calcium carbonate to the mill as well as to other customers. Corenso North America operates a facility that produces pulp and cores for the Verso mill's paper rolls.

Process Description:
The mill operates 24/7 except for a one or two-week outage sometime between May and August. The main inputs to the mill include soft and hard wood logs, raw water from the Wisconsin River, and recycled pulp from a Verso facility in Duluth, MN. This recycled pulp is eventually combined with pulp produced at the mill to make paper. The raw water is filtered at the facility for use in the pulping process, and the logs are debarked, chipped, and conveyed to either the #1 Fiberline (hard wood only) or the #2 Fiberline (soft or hard wood). For each line, the chips are steamed and fed into a digester along with strongly alkaline white liquor (NaOH & Na_2S) to cook and start to break down the chips. The pulp is isolated through a series of filters, a delignification process using oxygen, and a screening process and sent, as brown stock, to the bleach plant which uses chlorine dioxide and hydrogen peroxide as bleaching agents. Meanwhile, the non-fiber "weak black liquor" which is extracted from various points in the fiber line is thickened in evaporators to form heavy black liquor and is concentrated further in recovery furnaces, to form molten smelt. The smelt is dissolved to form green liquor, which is then pumped to the causticizing process. Here, it is combined with lime in two slakers running in parallel, and each slaker in turn feeds a series of causticizers where a reaction occurs and the inorganic chemicals which make up the white liquor are recovered. The combined slurry is then sent to a clarifier where the solids settle to the bottom and the liquid is extracted back to the digester as pure white liquor. The solids are further clarified to produce lime mud, which is baked in a lime kiln to recover the lime for reuse, along with new lime.

The pulp process utilizes steam and electricity from two boilers which burn approximately 60% coal and 40% bark removed from the logs (P1 & P2). The coal content is analyzed by the

supplier and is unloaded from trucks inside a shed, rather than from rail cars, in order to limit dust. A third boiler (P3) burns natural gas and is used for auxiliary purposes.

Staff Interview:
The mill produces roughly 550,000 tons of paper annually from two paper machines. The mill also has a waste water treatment plant which is always running and which also serves the Corenso core-making operation. Neither the paper machines nor the waste water treatment plant were a focus of this inspection.

Any non-condensable gases collected from various parts of the pulp process are vented to the P1 or P2 boilers for combustion. Because many of the process units are under pressure, they also contain pressure relief vents which are potential leak points. In order to comply with LDAR requirements, Ms. Anderson conducts a walkthrough every 30 days to visually check for steam exiting these vents, or ruptured pressure relief vent seals.

Boilers P1 and P2 are each controlled by an electrostatic precipitator (ESP). A stack test on these units is performed semiannually. Each of three recovery furnaces is controlled by a wet bottom ESP which is monitored by both a COMS and a CEMS. Emissions from the slakers and causticizers are controlled by a scrubber. Emissions from the lime kiln are exhausted to an ESP and then to a venture scrubber and monitored by both a COMS and a CEMS.

TOUR INFORMATION

EPA toured the facility: Yes

Data Collected and Observations:
EPA inspected the gas condenser for the #2 digester, which is one of the points Ms. Anderson visually inspects for steam during compliance walk-throughs of the facility. EPA also observed a digester, slaker, and lime kiln and observed the following control room readings:

- Lime kiln: 11.27% opacity on scrubber (Limit = 20%)
- Recovery Boiler #1: 3.0 ppm 12-hour average TRS (Limit = 17.5 ppm)
- Recovery Boiler #2: down for maintenance
- Recovery Boiler #3: 4.34 ppm 12-hour average TRS (Limit = 5.0 ppm)
- Recovery Boiler #3: 6% opacity, 6-minute average
- Recovery Boiler #3: 67.7 ppm 24-hour average NOx (Limit =.90 ppm)
- Power Boiler #1: 7% opacity, 24-hour average
- Power Boiler #2: 7% opacity, 24-hour average
- Power Boiler #3: 0.029 ppm NOx
- ESP for Power Boiler #1 current (3 zones): 33 amps, 85 amps, 85 amps
- ESP for Power Boiler # 1 voltage (3 zones): 280 volts, 343 volts, 302 volts
- ESP for Power Boiler #2 current (3 zones): 62 amps, 67 amps, 85 amps
- ESP for Power Boiler # 2 voltage (3 zones): 405 volts, 279 volts, 298 volts

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

EPA reviewed parts of a draft CAM plan that was created in conjunction with the recent Title V renewal. This plan is still under internal review and has not yet been submitted to the Wisconsin DNR. EPA requested a copy of the CAM plan once the internal review is complete.

CLOSING CONFERENCE

Requested documents:

- Power boilers
  - May 2016 stack test (for compliance with new boiler MACT)
  - 2015 stack tests for P1 & P2
  - Spreadsheet with fuel analysis records from July 2016
- Kraft Pulp Mill & Bleach plant
  - Most recent performance test report for total HAP (as methanol)
  - Most recent performance test for chlorinated HAP
- Recovery furnaces
  - CEMS data from July 2016 (TRS daily reports)
  - COMS data from July 2016
  - Monthly fuel usage for 2016, year-to-date
  - Good operating practices plan
- Lime Kiln
  - CEMS data from July 2016 (TRS daily reports)
  - COMS data from July 2016
  - Most recent performance test report
- Last four quarterly deviation reports
- LDAR records
  - Visual inspections from July 2016
  - Latest 3rd party annual test report including description of method
- PTE calculations for all emission units submitted to the state as part of latest Title V renewal process
- CAM plan

SIGNATURES

Lead Inspector: _____ Date: 12/6/16

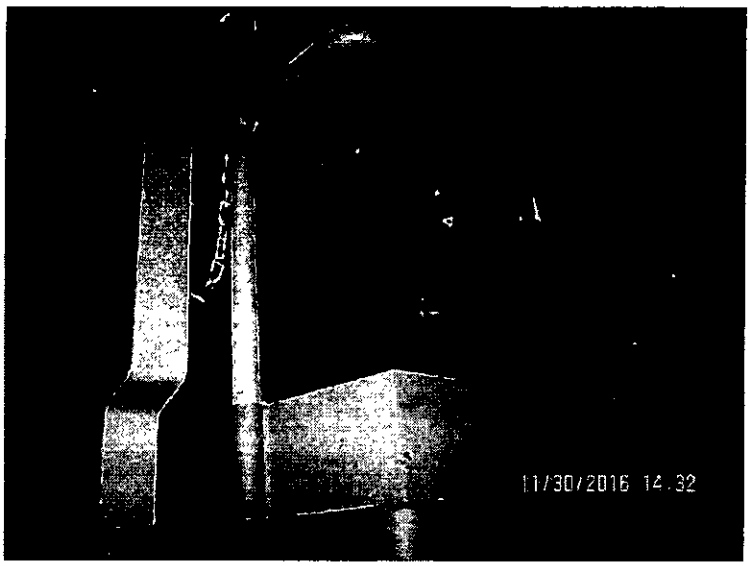
Section Chief: _____ Date: 12/16/16

APPENDICES AND ATTACHMENTS

- Appendix A: Photo Log

Facility Name: Verso Corporation Wisconsin Rapids Mill
Facility Location: 950 4th Avenue North, Wisconsin Rapids, WI 54495
Date of Inspection: November 30, 2016

APPENDIX A: PHOTO LOG



1: Digester Gas Condenser-LDAR location for inspection of visible steam.JPG

Location: Verso Wisconsin Rapids Mill
Photographer: David Sutlin

2: Digester Gas Condenser-Contents List.JPG

Location: Verso Wisconsin Rapids Mill
Photographer: David Sutlin

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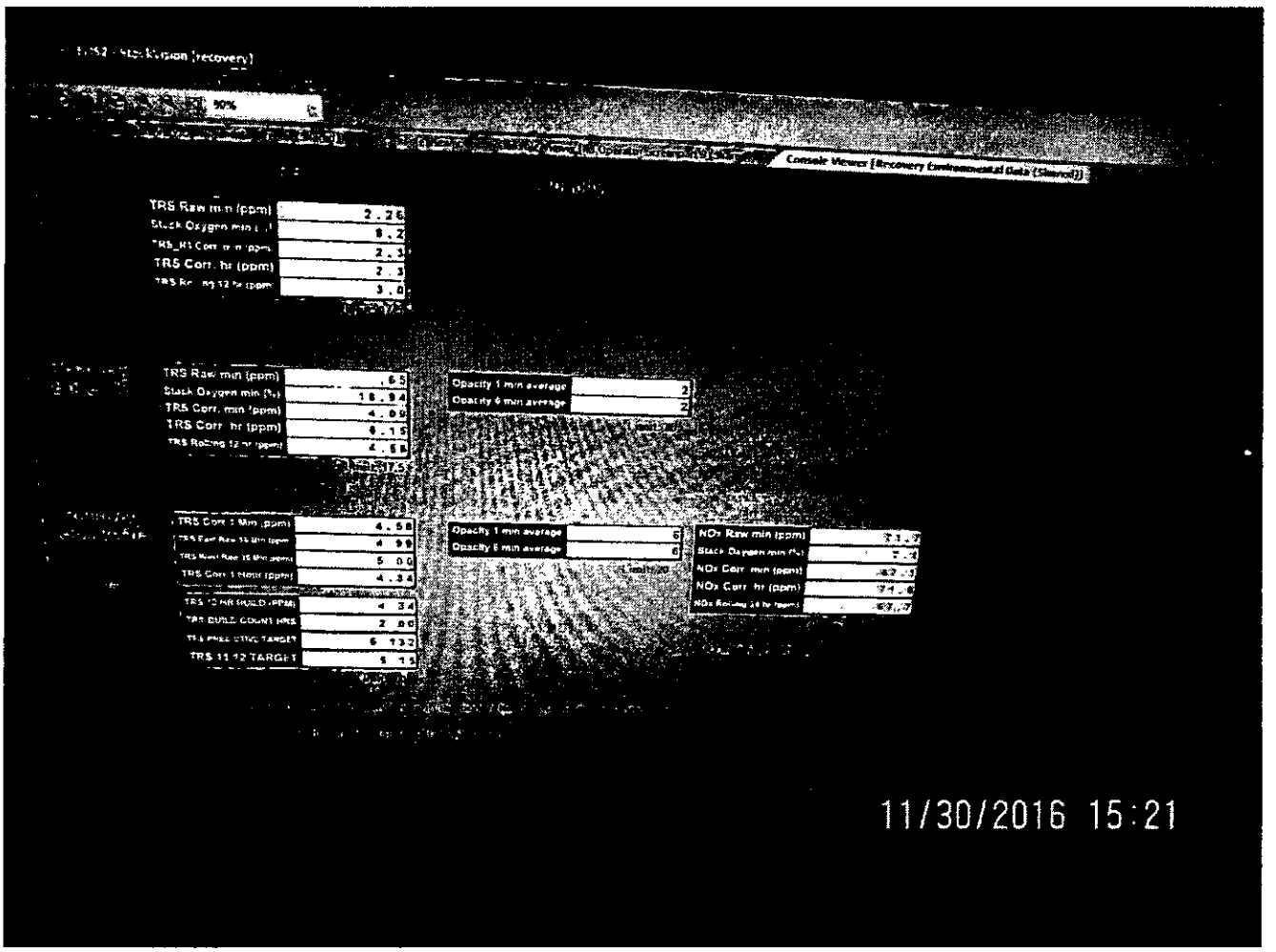

3: Recovery Boilers TRS CEMS data.JPG

Location: Verso Wisconsin Rapids Mill
Photographer: David Sutlin